I claim:

1. A compressive structural element comprising:

an enclosure having walls surrounding a cavity; and

a non-compressible material disposed in the cavity; wherein

the walls are shaped such that a first compressive force tending to compress the element by a first deflection causes an amplified second deflection of the walls into the non-compressible material, exerting a second compressive force against the non-compressible material, resulting in a resistance to the first deflection and the first compressive force tending to compress the element.

2. The compressive structural element of claim 1, wherein the walls are concavely shaped.

3. The compressive structural element of claim 1, wherein the walls are of a uniform thickness such that the second deflection causes minimal migration of the non-compressible material.

4. The compressive structural element of claim 1, wherein the walls gradually become thicker at the center of the cavity such that the second deflection causes increased migration of the non-compressible material.

5. The compressive structural element of claim 1, wherein the non-compressible material is an elastomer.

6. The compressive structural element of claim 1, wherein the non-compressible material is a liquid.

7. The compressive structural element of claim 1, wherein the non-compressible material is a combination of elastomer and liquid.

8. A tensile structural element comprising:

an enclosure having walls surrounding a cavity; and

a non-compressible material disposed in the cavity; wherein

the walls are shaped such that a tensile force tending to elongate the element by a first deflection

causes an amplified second deflection of the walls into the non-compressible material, exerting a compressive force against the non-compressible material, resulting in a resistance to the first deflection and the tensile force tending to elongate the element.

9. The tensile structural element of claim 8, wherein the walls are convexly shaped.

10. The tensile structural element of claim 8, wherein the walls are of a uniform thickness such that the second deflection causes minimal migration of the non-compressible material.

11. The tensile structural element of claim 8, wherein the walls gradually become thicker at the center of the cavity such that the second deflection causes increased migration of the non-compressible material.

12. The tensile structural element of claim 8, wherein the non-compressible material is an elastomer.

13. The tensile structural element of claim 8, wherein the non-compressible material is a liquid.

14. The compressive structural element of claim 8, wherein the non-compressible material is a combination of elastomer and liquid.

15. A structural element comprising:

compressive and tensile structural elements

the compressive structural element having a first enclosure having first walls surrounding a first cavity;

the tensile structural element having a second enclosure having second walls surrounding a second cavity;

a first non-compressible material disposed in the first cavity; and

a second non-compressible material disposed in the second cavity; wherein

the first walls are shaped such that a first force tending to compress the structural element by a first deflection causes an amplified second deflection of the first walls into the first non-compressible

material, exerting a first compressive force against the first non-compressible material, resulting in a resistance to the first deflection and the first force tending to compress the structural element; and

the second walls are shaped such that a second force tending to elongate the structural element by a third deflection causes an amplified fourth deflection of the second walls into the second non-compressible material, exerting a second compressive force against the second non-compressible material, resulting in a resistance to the third deflection and the second force tending to elongate the structural element.

16. The structural element of claim 15, wherein at least one of the first walls surrounding the first cavity also comprises at least one of the second walls surrounding the second cavity.

17. The structural element of claim 15, wherein the first walls are concavely shaped.

18. The structural element of claim 15, wherein the second walls are convexly shaped.

19. The structural element of claim 15, wherein the first and second walls are of a uniform thickness such that the second or fourth deflection causes minimal migration of the first and second non-compressible materials, respectively.

20. The structural element of claim 15, wherein the first and second walls gradually become thicker at the center of the first and second cavities such that the second or fourth deflection causes increased migration of the first and second non-compressible materials, respectively.

21. The structural element of claim 15, wherein at least one of the first and second non-compressible materials is an elastomer.

22. The structural element of claim 15, wherein at least one of the first and second non-compressible materials is a liquid.

23. The structural element of claim 15, wherein at

least one of the first and second non-compressible materials is a combination of elastomer and liquid.

24. A compressive structural element comprising;

a cylindrical enclosure having a wall, a top, a bottom, and a cavity defined by the wall, top and bottom, the top and bottom being separated by a height; and

a non-compressible material disposed in the cavity; wherein

the walls are concavely shaped such that a first compressive force tending to decrease the height causes an amplified deflection of the wall into the non-compressible material, exerting a second compressive force against the non-compressible material, resulting in a resistance to the amplified deflection and the first compressive force.

25. The compressive structural element of claim 24, wherein the wall, top and bottom comprise an integral shell surrounding the non-compressible material disposed in the cavity.

26. The compressive structural element of claim 25, wherein the wall comprises a plurality of panels separated by flectural joints for aiding the deflection of the wall into the non-compressible material.

27. The compressive structural element of claim 25, wherein the shell is a metal.

28. The compressive structural element of claim 24 wherein the wall is of a uniform thickness such that the amplified deflection causes minimal migration of the non-compressible material.

29. The compressive structural element of claim 24, wherein the wall gradually becomes thicker at the center of the cavity such that the amplified deflection causes increased migration of the non-compressible material.

30. The compressive structural element of claim 24, wherein the non-compressible material is an elastomer.

31. The compressive structural element of claim 24, wherein the non-compressible material is a liquid.

32. The compressive structural element of claim 24, wherein the non-compressible material is a combination of elastomer and liquid.

33. A tensile structural element comprising;

a cylindrical enclosure having a wall, a top, a bottom, and a cavity defined by the wall, top and bottom, the top and bottom being separated by a height; and

a non-compressible material disposed in the cavity; wherein

the walls are convexly shaped such that a tensile force tending to increase the height causes an amplified deflection of the wall into the non-compressible material, exerting a compressive force against the non-compressible material, resulting in a resistance to the amplified deflection and the tensile force.

34. The tensile structural element of claim 33,

wherein the wall, top and bottom comprise an integral shell surrounding the non-compressible material disposed in the cavity.

35. The tensile structural element of claim 34, wherein the shell is a metal.

36. The tensile structural element of claim 33, wherein the wall comprises a plurality of panels separated by flectural joints for aiding the deflection of the wall into the non-compressible material.

37. The tensile structural element of claim 33, wherein the wall is of a uniform thickness such that the amplified deflection causes minimal migration of the non-compressible material.

38. The tensile structural element of claim 33, wherein the wall gradually becomes thicker at the center of the cavity such that the amplified deflection causes increased migration of the non-compressible material.

39. The tensile structural element of claim 33, wherein the non-compressible material is an elastomer.

40. The tensile structural element of claim 33, wherein the non-compressible material is a liquid.

41. The compressive structural element of claim 33, wherein the non-compressible material is a combination of elastomer and liquid.

42. A structural beam comprising;

an upper surface in compression due to a loading force;

a lower surface in tension due to the loading force;

means for connecting the upper and lower surfaces;

a plurality of compressive structural elements disposed along the length of the upper surface, each compressive structural element comprising a first enclosure having first walls surrounding a first cavity, and a first non-compressible material disposed

in the first cavity, wherein the first walls are shaped such that the loading force tends to compress the compressive structural element by a first deflection causing an amplified second deflection of the first walls into the first non-compressible material, exerting a compressive force against the first non-compressible material, resulting in a resistance to the first deflection and the loading force; and

a plurality of tensile structural elements disposed along the length of the lower surface, each tensile structural element comprising a second enclosure having second walls surrounding a second cavity, and a second non-compressible material disposed in the second cavity, wherein the second walls are shaped such that the loading force tends to elongate the tensile structural element by a third deflection causing an amplified fourth deflection of the second walls into the second non-compressible material, exerting a compressive force against the second non-compressible material, resulting in a resistance to the third deflection and the loading force.

43. The structural beam of claim 42, wherein the shape of the beam is an I-beam and the means for connecting the upper and lower surfaces is a web.

44. The structural beam of claim 42, wherein the first and second walls are of a uniform thickness such that the second and fourth deflections causes minimal migration of the first and second non-compressible materials, respectively.

45. The structural beam of claim 42, wherein the first and second walls gradually become thicker at the center of the first and second cavities, such that the second and fourth deflections causes increased migration of the first and second non-compressible materials, respectively.

46. The tensile structural element of claim 42, wherein at least one of the first and second non-compressible materials is an elastomer.

47. The tensile structural element of claim 42,

wherein at least one of the first and second non-compressible materials is a liquid.

48. The compressive structural element of claim 42, wherein at least one of the first and second non-compressible materials is a combination of elastomer and liquid.

49. A structural beam comprising;

an upper surface in one of compression or tension due to a loading force;

a lower surface in the other of compression or tension due to the loading force;

means for connecting the upper surface to the lower surface; and

a plurality of structural elements disposed along the length of the upper and lower surfaces, each structural element comprising a compressive and a tensile structural element, the compressive structural element having a first enclosure having first walls surrounding a first cavity, the tensile structural element having a second enclosure having second walls surrounding a second cavity, a first non-compressible

material disposed in the first cavity, and a second non-compressible material disposed in the second cavity, wherein the first walls are shaped such that the loading force tends to compress the structural element by a first deflection causing an amplified second deflection of the first walls into the first non-compressible material, exerting a first compressive force against the first non-compressible material, resulting in a resistance to the first deflection and the loading force, and wherein the second walls are shaped such that the loading force tends to elongate the structural element by a third deflection causing an amplified fourth deflection of the second walls into the second non-compressible material, exerting a second compressive force against the second non-compressible material, resulting in a resistance to the third deflection and the loading force.

50. The structural beam of claim 49, wherein the shape of the beam is an I-beam and the means for connecting the upper and lower surfaces is a web.

51. The structural beam of claim 49, wherein the first and second walls are of a uniform thickness such that the second and fourth deflections causes minimal migration of the first and second non-compressible materials, respectively.

52. The structural beam of claim 49, wherein the first and second walls gradually become thicker at the center of the first and second cavities, such that the second and fourth deflections causes increased migration of the first and second non-compressible materials, respectively.

53. The structural beam of claim 49, wherein at least one of the first and second non-compressible materials is an elastomer.

54. The structural beam of claim 49, wherein at least one of the first and second non-compressible materials is a liquid.

55. The structural beam of claim 49, wherein at least one of the first and second non-compressible materials

is a combination of elastomer and liquid.

56. A structural beam comprising:

an upper surface;

a lower surface;

a first and second wall connecting the upper and lower surface, the volume between the walls defining a cavity; and

a non-compressible material disposed in the cavity; wherein

the walls are shaped such that a first compressive force tending to compress the beam by a first deflection causes an amplified second deflection of the walls into the non-compressible material, exerting a second compressive force against the non-compressible material, resulting in a resistance to the first deflection and the force tending to compress the beam.

57. The structural beam of claim 56, wherein the shape of the beam is an I-beam.

58. The structural beam of claim 56, wherein the

walls are concavely shaped.

59. The structural beam of claim 56, wherein the walls are of a uniform thickness such that the second deflection causes minimal migration of the non-compressible material.

60. The structural beam of claim 56, wherein the walls gradually become thicker at the center of the cavity such that the second deflection causes increased migration of the non-compressible material.

61. The tensile structural element of claim 56, wherein the non-compressible material is an elastomer.

62. The tensile structural element of claim 56, wherein the non-compressible material is a liquid.

63. The compressive structural element of claim 56, wherein the non-compressible material is a combination of elastomer and liquid.

64. A structural beam having a cross-sectional

profile, first portions of the profile being in compression and second portions of the profile being in tension due to a loading force, the beam comprising:

a multiplicity of compressive structural elements disposed throughout the cross-sectional profile in the portions in compression, each compressive structural element comprising a first enclosure having first walls surrounding a first cavity, and a first non-compressible material disposed in the first cavity, wherein the first walls are shaped such that the compressive force due to the loading force tends to compress the compressive structural element by a first deflection causing an amplified second deflection of the first walls into the first non-compressible material, exerting a compressive force due to the second deflection against the first non-compressible material, resulting in a resistance to the first deflection and the loading force; and

a multiplicity of tensile structural elements disposed throughout the cross-sectional profile in the portions in tension, each tensile element comprising a second enclosure having second walls surrounding a

second cavity, and a second non-compressible material disposed in the second cavity, wherein the second walls are shaped such that the tensile force due to the loading force tends to elongate the tensile structural element by a third deflection causing an amplified fourth deflection of the second walls into the second non-compressible material, exerting a compressive force due to the fourth deflection against the second non-compressible material, resulting in a resistance to the third deflection and the loading force.

65. The structural beam of claim 64, wherein the first structural elements are of greater incidence in portions of greatest compression, and wherein the second structural elements are of greater incidence in portions of greatest tension.

66. The structural beam of claim 64, wherein the shape of the beam is an I-beam, having an upper flange in compression, a lower flange in tension, and a web connecting the upper and lower flanges, and wherein the portions of greatest compression is in the upper

flange, and the portions of greatest tension is in the lower flange.

67. The structural beam of claim 64, wherein the first and second walls are of a uniform thickness such that the second and fourth deflections causes minimal migration of the first and second non-compressible materials, respectively.

68. The structural beam of claim 64, wherein the first and second walls gradually become thicker at the center of the first and second cavities, such that the second and fourth deflections causes increased migration of the first and second non-compressible materials, respectively.

69. The tensile structural element of claim 64, wherein at least one of the first and second non-compressible materials is an elastomer.

70. The tensile structural element of claim 64, wherein at least one of the first and second non-compressible materials is a liquid.

71. The tensile structural element of claim 64, wherein at least one of the first and second non-compressible materials is a combination of elastomer and liquid.

72. A structural beam having a cross-sectional profile, first portions of the profile being in compression and second portions of the profile being in tension due to a loading force, the beam comprising:

a multiplicity of structural elements disposed throughout the cross-sectional profile of the beam, each structural element comprising a compressive and a tensile structural element, the compressive structural element having a first enclosure having first walls surrounding a first cavity, the tensile structural element having a second enclosure having second walls surrounding a second cavity, a first non-compressible material disposed in the first cavity, and a second non-compressible material disposed in the second cavity, wherein the first walls are shaped such that the loading force tends to compress the structural

element by a first deflection causing an amplified second deflection of the first walls into the first non-compressible material, exerting a first compressive force against the first non-compressible material, resulting in a resistance to the first deflection and the loading force, and wherein the second walls are shaped such that the loading force tends to elongate the structural element by a third deflection causing an amplified fourth deflection of the second walls into the second non-compressible material, exerting a second compressive force against the second non-compressible material, resulting in a resistance to the third deflection and the loading force.

73. The structural beam of claim 72, wherein the structural elements are of greater incidence in portions of greatest compression and greatest tension.

74. The structural beam of claim 73, wherein the shape of the beam is an I-beam, having an upper flange in compression, a lower flange in tension, and a web connecting the upper and lower flanges, and wherein

the portions of greatest compression is in the upper flange, and the portions of greatest tension is in the lower flange.

75. The structural beam of claim 72, wherein the first and second walls are of a uniform thickness such that the second and fourth deflections causes minimal migration of the first and second non-compressible materials, respectively.

76. The structural beam of claim 72, wherein the first and second walls gradually become thicker at the center of the first and second cavities, such that the second and fourth deflections causes increased migration of the first and second non-compressible materials, respectively.

77. The structural beam of claim 72, wherein at least one of the first and second non-compressible materials is an elastomer.

78. The structural beam of claim 72, wherein at least one of the first and second non-compressible materials

is a liquid.

79. The structural beam of claim 72, wherein at least one of the first and second non-compressible materials is a combination of elastomer and liquid.

80. A motion impartation device comprising;

a driving portion;

a driven portion engaged with the driving portion such that a gap separates the driving portion from the driven portion; and

a structural element disposed in each gap such that a first compressive force is transferred from the driven portion to the driving portion and a tensile force is transferred from the driven portion to the driving portion, each structural element comprising a compressive and a tensile structural element, the compressive structural element having a first enclosure having first walls surrounding a first cavity, the tensile structural element having a second enclosure having second walls surrounding a second cavity, a first non-compressible material disposed in the first cavity, and a second non-compressible

material disposed in the second cavity, wherein the first walls are shaped such that the compression force tends to compress the compressive structural element by a first deflection causing an amplified second deflection of the first walls into the first non-compressible material, exerting a second compressive force against the first non-compressible material, resulting in a resistance to the first deflection and the first compressive force, and wherein the second walls are shaped such that the tensile force tends to elongate the structural element by a third deflection causing an amplified fourth deflection of the second walls into the second non-compressible material, exerting a third compressive force against the second non-compressible material, resulting in a resistance to the third deflection and the tensile force.

81. The motion impartation device of claim 80, wherein the device is a coupling for imparting rotation from a driving shaft to a driven shaft, the driving shaft being connected to the driving portion and the driven shaft being connected to the driven portion, the driving and driven portions each having a

plurality of teeth, the teeth being meshingly engaged wherein the structural elements are disposed in gaps between the teeth of the driven portion and the teeth of the driving portion.

82. The motion impartation device of claim 80, wherein the device is a coupling for imparting translation of the driven portion to the driving portion, the driving and driven portions each having a plurality of teeth, the teeth being meshingly engaged wherein the structural elements are disposed in gaps between the teeth of the driven portion and the teeth of the driving portion.

83. The motion impartation device of claim 80, wherein the first and second walls are of a uniform thickness such that the second and fourth deflections causes minimal migration of the first and second non-compressible materials, respectively.

84. The motion impartation device of claim 80, wherein the first and second walls gradually become thicker at the center of the first and second

cavities, such that the second and fourth deflections causes increased migration of the first and second non-compressible materials, respectively.

85. The motion impartation device of claim 80, wherein at least one of the first and second non-compressible materials is an elastomer.

86. The motion impartation device of claim 80, wherein at least one of the first and second non-compressible materials is a liquid.

87. The motion impartation device of claim 80, wherein at least one of the first and second non-compressible materials is a combination of elastomer and liquid.

88. A method for fabricating a structural beam having a cross-sectional profile, first portions of the profile being in compression and second portions of the profile being in tension due to a loading force, the beam also having compressive and tensile structural elements, each compressive structural

element comprising a first enclosure having first walls surrounding a first cavity, and a first non-compressible material disposed in the first cavity, wherein the first walls are shaped such that the compressive force due to the loading force tends to compress the compressive structural element by a first deflection causing an amplified second deflection of the first walls into the first non-compressible material, exerting a compressive force due to the second deflection against the first non-compressible material, resulting in a resistance to the first deflection and the loading force, and each tensile element comprising a second enclosure having second walls surrounding a second cavity, and a second non-compressible material disposed in the second cavity, wherein the second walls are shaped such that the tensile force due to the loading force tends to elongate the tensile structural element by a third deflection causing an amplified fourth deflection of the second walls into the second non-compressible material, exerting a compressive force due to the fourth deflection against the second non-compressible material, resulting in a resistance to the third

deflection and the loading force, the method comprising the steps of;

providing compressive structural elements of the present invention;

providing tensile structural elements of the present invention;

forming the cross-sectional profile of the beam to a predetermined length; and

disposing a multiplicity of the compressive and tensile structural elements throughout the beam cross-sectional profile and along its length.

89. The method of claim 88, wherein the providing steps further include the sub-steps of:

fabricating the first non-compressible material to a shape and size substantially similar to that of the first cavity;

fabricating the second non-compressible material to a shape and size substantially similar to that of the second cavity;

forming the first enclosures having first walls, around the first non-compressible material; and

forming the second enclosures having second

walls, around the second non-compressible material.

90. The method of claim 89, wherein the steps of fabricating the first and second non-compressible materials are performed by injection molding, wherein the non-compressible material is an elastomer.

91. The method of claim 89, wherein the steps of forming the first and second enclosures around their respective first and second non-compressible materials are performed by spraying a metal shell onto the first and second non-compressible materials.

92. The method of claim 89, wherein the steps of forming the first and second enclosures around their respective first and second non-compressible materials are performed by dipping the elastomer into a liquid material bath which hardens to form a shell around the first and second non-compressible materials.

93. The method of claim 88, wherein the providing steps further include the sub-steps of:

forming the first enclosure;

forming the second enclosure;

filling the first enclosure with the first non-compressible material; and

filling the second enclosure with the second non-compressible material.

94. The method of claim 88, wherein the step of disposing a multiplicity of the compressive and tensile structural elements throughout the beam cross-sectional profile and along its length further includes the sub-steps of:

weighting the greatest incidence of compressive structural elements in portions of greatest compression; and

weighting the greatest incidence of tensile structural elements in portions of greatest tension.

95. The method of claim 94, wherein the weighting sub-steps comprise:

providing a wax replica of the beam;

positioning the compressive and tensile structural elements within the wax replica in portions

of greatest compression and greatest tension, respectively;

casting the beam by adding liquid material to the wax replica such that the liquid material replaces the wax and the structural elements remain positioned in the portions of greatest compression and tension.

96. The method of claim 95, wherein the positioning sub-step is performed by subjecting the wax replica to centrifugal force such that the centrifugal force exerted on the compressive and tensile elements causes them to relocate to positions along the cross-sectional profile corresponding to portions of greatest compression and portions of greatest tension, respectively.

97. The method of claim 94, wherein the weighting sub-steps comprise:

stringing the compressive structural elements together along an axis parallel to their walls;

stringing the tensile structural elements together along an axis parallel to their walls;

positioning the compressive and tensile

structural element strings in areas of greatest portions of compression and tension, respectively; and

casting the beam around the compressive and tensile structural element strings such that they remain positioned in areas of greatest compression and tension, respectively.

98. The method of claim 97, wherein the stringing sub-step comprises welding the elements together.

99. The method of claim 97, wherein the forming step comprises casting the beam after the positioning step.

100. The method of claim 97, wherein the forming step comprises extruding the beam, and where the extruding occurs simultaneous with the positioning step.

101. A method for fabricating a structural beam having a cross-sectional profile, first portions of the profile being in compression and second portions of the profile being in tension due to a loading force, the beam also having structural elements, each structural element comprising a compressive and

tensile structural element, the compressive structural element having a first enclosure having first walls surrounding a first cavity, the tensile structural element having a second enclosure having second walls surrounding a second cavity, a first non-compressible material disposed in the first cavity, and a second non-compressible material disposed in the second cavity, wherein the first walls are shaped such that the loading force tends to compress the structural element by a first deflection causing an amplified second deflection of the first walls into the first non-compressible material, exerting a first compressive force against the first non-compressible material, resulting in a resistance to the first deflection and the loading force, and wherein the second walls are shaped such that the loading force tends to elongate the structural element by a third deflection causing an amplified fourth deflection of the second walls into the second non-compressible material, exerting a second compressive force against the second non-compressible material, resulting in a resistance to the third deflection and the loading force, the method comprising the steps of;

providing compressive structural elements of the present invention;

providing tensile structural elements of the present invention;

joining the compressive and tensile structural elements to form the structural elements;

forming the cross-sectional profile of the beam to a predetermined length; and

disposing a multiplicity of the structural elements throughout the beam cross-sectional profile and along its length.

102. The method of claim 101, wherein the providing steps further include the sub-steps of:

fabricating the first non-compressible material to a shape and size substantially similar to that of the first cavity;

fabricating the second non-compressible material to a shape and size substantially similar to that of the second cavity;

forming the first enclosure having first walls, around the first non-compressible material; and

forming the second enclosure having second walls,

around the second non-compressible material.

103. The method of claim 102, wherein the steps of fabricating the first and second non-compressible materials are performed by injection molding, wherein the non-compressible material is an elastomer.

104. The method of claim 102, wherein the steps of forming the first and second enclosures around their respective first and second non-compressible materials are performed by spraying a metal shell onto the first and second non-compressible materials.

105. The method of claim 102, wherein the steps of forming the first and second enclosures around their respective first and second non-compressible materials are performed by dipping the elastomer into a liquid material bath which hardens to form a shell around the first and second non-compressible materials.

106. The method of claim 101, wherein the providing steps further include the sub-steps of:

forming the first enclosure;

forming the second enclosure;

filling the first enclosure with the first non-compressible material; and

filling the second enclosure with the second non-compressible material.

107. The method of claim 101, wherein the step of disposing a multiplicity of the structural elements throughout the beam cross-sectional profile and along its length further includes the sub-step of weighting the greatest incidence of structural elements in portions of greatest compression and greatest tension.

108. The method of claim 107, wherein the weighting sub-steps comprise:

providing a wax replica of the beam;

positioning the compressive and tensile structural elements within the wax replica in portions of greatest compression and greatest tension, respectively;

casting the beam by adding liquid material to the wax replica such that the liquid material replaces the wax and leaves the structural elements in their

positions.

109. The method of claim 108, wherein the positioning sub-step is performed by subjecting the wax replica to centrifugal force such that the centrifugal force exerted on the compressive and tensile elements causes them to relocate to positions along the cross-sectional profile corresponding to portions of greatest compression and portions of greatest tension, respectively.

110. The method of claim 107, wherein the weighting sub-steps comprise:

stringing the compressive structural elements together along an axis parallel to their walls;

stringing the tensile structural elements together along an axis parallel to their walls;

positioning the compressive and tensile structural element strings in areas of greatest portions of compression and tension, respectively; and

forming the beam around the compressive and tensile structural element strings such that they remain in areas of greatest compression and tension,

respectively.

111. The method of claim 110, wherein the stringing sub-step comprises welding the elements together.

112. The method of claim 110, wherein the forming step comprises casting the beam after the positioning step.

113. The method of claim 110, wherein the forming step comprises extruding the beam, and where the extruding occurs simultaneous with the positioning step.

114. The method of claim 101, wherein the joining step comprises welding the compressive and tensile structural elements together to form a common wall.